IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

XR COMMUNICATIONS, LLC, dba VIVATO TECHNOLOGIES *Plaintiff*, v. AT&T SERVICES INC., AT&T MOBILITY LLC, and AT&T CORP. *Defendant*, NOKIA OF AMERICA CORPORATION, ERICSSON INC. *Intervenors*.	Case No. 2:23-cv-00202-JRG-RSP (Lead Case) JURY TRIAL DEMANDED

PLAINTIFF XR COMMUNICATIONS, LLC'S
PARTIAL OBJECTION TO CLAIM CONSTRUCTION ORDER

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Plaintiff XR Communications, LLC dba Vivato Technologies ("Plaintiff" or "Vivato") respectfully objects in part to the Claim Construction Order (ECF 99).

I. U.S. PATENT NO. 7,177,369 ("'369 PATENT")

A. "pre-equalization parameter" terms ('369 patent, claims 1, 13, 21, 32, 33, 41)

Vivato does not object to the Order's construction of this term.

B. "substantially reciprocal to" ('369 patent, claim 12)

The Court found that the intrinsic record does not provide reasonable certainty on when the forward transmission path is "substantially reciprocal" to the reverse transmission path. Vivato objects. The intrinsic record discloses that "reciprocity" is a well-known property used to describe the paths in a wireless channel such as in Time Division Duplex (TDD) systems. Ex. 1 ('369 Patent), 7:21-34. The '369 patent specification describes "substantially reciprocal" as reciprocal for "a given moment in time between a base station device and a consumer premise equipment device." Ex. 1 ('369 Patent), 2:13-16. The '369 patent also says that reciprocity is an *assumption* about the channel that POSITAs make about Time Division Duplex (TDD) systems *for certain durations of time*. Ex. 1 ('369 Patent), 10:61-11:5 ("[i]f TDD is used, then the channel can be assumed to be reciprocal for durations (coherence time) of approximately 10 ms."). The Court found that this is not an objective boundary, but the law does not require mathematical precision. These disclosures provide enough certainty that the claim 12 embodiment is directed to a TDD system like in the patent. "Claim language employing terms of degree has long been found definite where it provided enough certainty to one of skill in the art when read in the context of the invention." *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1370 (Fed. Cir. 2014).

II. U.S. PATENT NO. 8,289,939 ("'939 PATENT")

A. "wireless input/output (I/O) unit" ('939 patent, claims 15, 30)

Vivato does not object to the Court's construction of this term.

B. "signal transmission/reception coordination logic" ('939 patent, claims 15, 30)

Vivato objects to the Court's finding that this is means-plus-function; indeed, while the Central District of California found that it was, "[t]he Western District of Texas, however, concluded this is not a means-plus-function term." ECF 99 at 22. At bottom, the Court agrees with Vivato that the intrinsic record says to implement the logic in the baseband processing layer of a processing chip in a wireless routing device, but it holds that this does not indicate what the logic is and what structure it has. ECF 99 at 23-24. But the intrinsic record clearly establishes a baseband signal processor as structure, consistent with the expectation and understanding of a skilled artisan in wireless communication systems. And if any further information is needed to know what the structure of an infringing apparatus is, the claims and specification provide the necessary context, defining the inputs, outputs, and structural connections of the logic. The '939 patent claims a "***signal***" logic that monitors the access points for received ***signals*** and restrains ***signal*** transmission, which illustrates the inputs and outputs to a baseband signal processor chip or equivalent. The '939 patent couples the term "signal transmission/reception coordination logic" with "language describing its operation." *Dyfan,* 28 F.4th at 1367-68. The claims recite the inputs to the logic ("monitoring the plurality of access points for *received signals*") and the output ("restrain[ing]" another access point from transmitting *signal*). *See* '939 patent, cl. 15, 30; *see id.* 6:1-15. Similarly, Figure 4 depicts signal transmission/reception coordination logic 404 to "monitor the multiple access points

402(1…N) to ascertain when a signal is being received" and to "restrain" signal transmissions on the access points—just as claimed. '939 patent, 5:65-6:15, 6:16-53. This intrinsic record shows that an ordinary artisan understands the structure of the signal logic in a wireless system, as did the Patent Office. This is a far narrower and clearer structure than "code" found to be structural in the *Dyfan* case. *Dyfan LLC v. Target Corp.*, 28 F.4th 1360, 1367 (Fed. Cir. 2022) (reversing district court's finding that § 112 ¶6 applied to terms "code" and "application" which could be implemented using "off-the-shelf" software). It is more analogous to cases involving "processor" or "circuit." *Apex Inc. v. Raritan Comput., Inc.,* 325 F.3d 1364, 1373 (Fed. Cir. 2003) (holding "circuit" connotes structure and is not §112(6)) (cited with approval in *Dyfan*); *See VDPP LLC v. Vizio Inc.,* No. 2021-2040 (Fed. Cir. Mar. 2022) (nonprecedential) (reversing means-plus-function treatment for "processor"); *WSOU Investments LLC v. Google LLC*, No. 2022-1063, 2023 WL 6889033, at *4 (Fed. Cir. Oct. 19, 2023) (reversing the district court's finding that § 112 ¶ 6 applied to the terms "computer program code," "memory," and "processor").

In reaching step two, the Central District of California found the corresponding structure is "signal transmission/coordination logic 404" and "MAC coordinator logic 606" having characteristics and configuration set forth in the specification. Ex. 5 (CDCA Order) at 8-10. Those corresponding structures are clearly linked to the claimed functions, as the CDCA court held. *Id.* Vivato believes that the Central District of California's construction is required by the law mandating that a means-plus-function term cover *all* corresponding structure linked to the claimed functions. Here, Vivato objects to the Court's Order insofar as the Order finds that the Figures 3-6 and accompanying text fail to disclose corresponding structure clearly linked to the recited functions. Vivato submits that these embodiments are

clearly linked to the recited functions and disclose corresponding structure, including "signal transmission/reception coordination logic 404" which is a term that a person of ordinary skill in the art understands as a structure, especially in light of the text accompanying Figures 3-6 showing the processing circuitry in the access station as signal logic 404 structure within the wireless input/output unit structure in Figure 4, or as MAC logic 606 in Figure 6. In addition, Vivato submits that Figure 5 embodiment and the accompanying text which closely mirrors the claim language together disclose sufficient structure for the logic by reciting the inputs, outputs, structural connections, and operation of the logic. '939 patent, 5:65-6:54.

Separately, the Court's Order finds that at least the Figure 7 and 12 embodiments to disclose an algorithm for performing the recited function. ECF 99 at 25-26 ("(1) accepting multiple receive indicators from multiple BB units; (2) determining whether an affirmative signal reception indicator from a BB unit is detected in the indicators; (3) providing instructions to the MACs that are associated with any BB units for which an affirmative reception indicator is detected to restrain signal transmission."); *see* '939 Patent, 17:54-64. The Order finds that the corresponding structure is a general purpose processor programmed to implement these algorithmic steps, and equivalents thereof. An equivalent algorithm is also disclosed in the context of the Figure 13 embodiment, which recites the following corresponding structure/algorithm:

> Signal transmission/reception coordination logic 404 applies one or more coordination functions to the receive information accepted from RF parts 610(1, 2 . . . N). The resulting combined receive information is forwarded to BB units 608(1, 2 . . . K). Based on the combined receive information, respective BB units 608(1, 2 . . . K) provide MAC primitives to associated respective MACs 604(1, 2, , , K). The MAC primitives can instruct the MACs 604(1, 2

> ... K) with regard to whether a signal is being received and/or constructively received by a corresponding RF part 610 and emanation apparatus 1204 pair.
>
> '939 patent, 18:45-55.

C. "restrain . . . responsive to the ascertaining . . ." ('939 patent claims 15, 30)

Vivato agrees with the "plain and ordinary meaning" construction for this term and agrees with the Court that the "ascertaining" and "restraining" steps do not need to be contemporaneous. ECF 99 at 31 ("Specifically, the [California] court considered whether the claims require the "ascertaining" and "restraining" to be contemporaneous, and concluded there is no such requirement. See Special Master's Report, Dkt. No. 81-7 at 63 (noting "Defendants have not demonstrated that one action being 'responsive to' another action necessarily requires the actions to be contemporaneous"); see also Order Adopting Special Master's Report, Dkt. No. 81-8 at 11–12. This Court agrees that is not a requirement of the claims, in part because the invention would not know to 'restrain' transmission until it first 'ascertains' reception."). Below, Defendants argued that the "ascertaining" and "restraining" steps need to "happen at the same time." ECF 99 at 28. The Court rejected that position. ECF 99 at 31.

Separately, the Court held that the "'restraining' must happen in response to the signal *being received*, and not what an access point is *expecting* to receive in the future." ECF 99 at 31. The Court characterized Vivato's position as in tension with the present tense "is receiving" language of the claims. However, Vivato maintains that the claim language at issue does not limit *how* an access point ascertains that a signal is being received. The specification explains that one embodiment of the claimed "restraining" involves ascertaining that the access point is receiving a signal because the access point is expecting an immediate response, and restraining transmission from another access point

to avoid interference with the signal that the system knows the first access point is receiving. '939 Patent, 17:18-32. The Order suggests that Claim 15 is inconsistent with this interpretation because "Claim 15 requires the 'second signal' to be 'ongoing on a second channel,' and its final limitation requires the restraining to prevent degradation to the first and second signals, suggesting those signals are still being transmitted when the 'restraining' happens. '939 Patent at 20:45–47." But Claim 30 recites no such limitations, and the doctrine of claim differentiation forecloses importing limitations in Claim 15 into Claim 30. The correct interpretation of Claim 30 cannot import the additional requirements appearing only in Claim 15. Beyond claim 15, the Order also points to the specification's description of a "signal" as a "e.g. packet" at col. 1:30 for the proposition that "signal" does not refer to an *expected* signal. But the term "signal" carries its full plain and ordinary meaning, and the specification does not define "signal" as only and exclusively a "packet." *See* '939 Patent 4:20-36 (identifying "signals (e.g., wireless communication(s) 106 (of FIG. 1))"), 9:46-59 (identifying "the receive indicators may comprise indications of signal reception based on energy signals, cross-correlation signals, data signals, other transmit and/or control signals, some combination thereof, and so forth."), 13:4-9 (describing a "large interferer emanating an appropriate signal for a sufficiently long duration"). On balance, the sentence at col. 1:30 about "signal (e.g., packet") does not support importing limitations from Claim 15 into Claim 30. The balance of the specification likewise counsels against doing so. It discloses that the *regularity* or *frequency* of *receptions* can be used as one way to ascertain when an access point is receiving a signal, such as a signal that is recurring. '939 Patent, 13:34-64.

D. "The access point" (claims 20-21)

Vivato objects. In context, "the access point" refers to "the first access point" and

is not indefinite.

III. U.S. PATENT NO. 8,737,511 ("'511 PATENT")

A. "n multiple-input multiple-output transceivers (MIMO)" ('511 patent, cl. 1, 10)

Vivato does not object to the Court's construction of this term.

B. "MIMO transmitter . . . " / "MIMO receiver . . ." ('511 patent, claims 1, 10, 20)

Vivato does not object to the Court's construction of this term.

C. "2nd Generation Partnership Project (3GPP) Long Term Evolution (LTE), 3GPP LTE-Advanced, 3GPP LTE-TDD, 3GPP LTE-FDD" ('511 patent, claims 2, 11)

Vivato objects to the insertion of language "that existed at the time of the invention" as it adds confusion where none needs to exist. Interpreting the claim to have the meaning it had at the time of filing does not merit an "at the time of the invention" construction here, because the meaning of these terms at the time of filing was a reference to body of 3GPP standards known to be updated over time. The Court should follow the Western District of Texas and not construe the claim. If not, the Court should at least clarify that claims 2 and 11 can be infringed by a 3GPP standard that existed at the time of the invention even if that standard has been updated over time. '511 Patent at 3:30-47.

IV. U.S. PATENT NO. 10,715,235 (THE '235 PATENT)

A. "transceiver" ('235 patent, claims 1, 15, 18, 19)

Vivato does not object to the Court's construction of this term.

Dated: November 27, 2024

Respectfully submitted,

/s/ Reza Mirzaie

Marc Fenster
CA State Bar No. 181067
Reza Mirzaie
CA State Bar No. 246953
Adam Hoffman
CA State Bar No. 218740
Neil A. Rubin
CA State Bar No. 250761
James Pickens
CA State Bar No. 307474
Christian W. Conkle
CA State Bar No. 306374
Philip Wang
CA State Bar No. 262239
Minna Jay
CA State Bar No. 305941
Paul Kroeger
CA State Bar No. 229074
RUSS AUGUST & KABAT
12424 Wilshire Blvd. 12th Floor
Los Angeles, CA 90025
Telephone: 310-826-7474
rak_vivato@raklaw.com

Attorneys for Plaintiff,
XR Communications, LLC,
dba Vivato Technologies

CERTIFICATE OF SERVICE

I hereby certify that the counsel of record who are deemed to have consented to electronic service are being served on November 27, 2024, with a copy of this document via the Court's ECF system.

/s/ Reza Mirzaie
Reza Mirzaie